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MARKET OPPORTUNITIES FOR FISH FARMING CAGE FRAMES IN THE REPUBLIC OF KARELIA
CASE: ECOFOSTER GROUP LTD

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Title
Market opportunities for fish farming cage frames in the Republic of Karelia

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Abstract

In the Republic of Karelia , the company Ecofoster Group Ltd has a subsidiary that manufactures products made of polyethylene. Currently, though, the production facilities are not operating at their full capacity. Ecofoster Group Ltd would like to develop and expand its operations. In light of this, this thesis aimed at providing an overview of the fish farming market in the Republic of Karelia for Ecofoster Group Ltd. The company could then decide whether or not to start production and sales of fish farming cage frames in the Republic of Karelia. Furthermore, research provided information on the variety of cage frames used at the fish farms as well as potential competitors in the Republic of Karelia.

Telephone interviews of either managing directors or chief pisciculturists of fish farms in the Republic of Karelia served as a qualitative research method. The research revealed that in the Republic of Karelia only one-quarter of fish farms are using modern equipment. Cages are usually made of wooden barrels or low pressure polyethylene pipes as the floatation system, with the frame and walkways made out of wood. However, in the opinion of fish farmers, the best material for cage frames is low pressure polyethylene, even if the price is considered too expensive.

This fish farming market has not fully developed in the Republic of Karelia. In 2011, growth was only one-quarter the total capacity of the region. Only two cage frames producers operate in the Republic of Karelia, with cage frames being brought from others places as well. The currently offered cage frames still have some problems, which fish farmers believe to be result of the Russian way of doing them. This gives the opportunity for Ecofoster Group Ltd to start production of cage frames in Russia, but in the end price of cage frames may be too high for fish farmers.

For future research, the author suggests extending the research to include the fish farming market of the Murmansk region, because information acquired from both areas will be more accurate and useful for the company rather than only from one area.

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Nimeke
Markkinamahdollisuuksia kassikehikoilla Karjalan Tasavallassa

Toimeksiantaja
Ecofoster Group Oy

Tiivistelmä

Karjalan tasavallassa sijaitsee Ecofoster Group Oy:n tytäryhtiön omistama tuotantolaitos, jossa valmistetaan tuotteita polyeteenimuovista. Tällä hetkellä tuotantolaitos ei toimi täydellä kapasiteetilla, mutta Ecofoster Group Oy haluaisi kehittää ja laajentaa toimintaansa. Tämän opinnäytetyön tavoitteena oli antaa yleiskuva kalankasvatus-markkinoista Karjalan tasavallassa Ecofoster Group Oy:tä varten, jotta yritys voi päättää, aloittaako se kassikehikoiden valmistuksen ja myynnin Karjalan tasavallassa. Tutkimus antoi lisäksi tietoja kalankasvattajien käyttämistä kassikehikoista sekä mahdollisista kassikehikoiden valmistajista Karjalan tasavallassa.

Tutkimusmenetelmänä on käytetty laadullista tutkimusta haastattelemalla puhelimitse Karjalan tasavallassa sijaitsevien kalakasvatuslaitoksien toimitusjohtajia ja johtavia kalankasvattajia. Tutkimuksessa selvisi, että ainoastaan yksi neljäsosa kalankasvatuslaitoksista käyttää nykyaikaista välineistöä. Yleisesti kassikehikko runko on valmistettu puusta ja kellukkeet tynnyreistä tai muoviputkista. Kalankasvattajien mielestä kuitenkin paras materiaali kassikehikoiden valmistukseen on polyeteenimuovi, vaikkakin siitä valmistetut kassikehikot ovat tällä hetkellä kalankasvattajien mielestä liian kalliita.

Kalankasvatus-markkinat eivät ole vielä täysin kehittyneet Karjalan tasavallassa. Vuonna 2011 Karjalassa kasvatettiin kalaa vain neljäsosa siitä, miten paljon kalaa olisi voitu kasvattaa kaikki vesivarannot kasvatuskäyttöön ottamalla. Karjalan tasavallassa ei ole kuin kaksi kassikehikoiden valmistajaa, mutta sinne tuodaan kassikehikoita muualtakin. Kalankasvattajien mielestä venäläisissä kassikehikoissa on vielä paljon ongelmia, jotka johtuvat venäläisestä laadusta. Tämä avaa mahdollisuuksia Ecofoster Group Oy:lle kassikehikoiden valmistukseen Venäjälle, mutta kalankasvattajille voi hinta muodostua esteeksi niiden hankkimiseen.

Ehdotuksena seuraavan tutkimukseen on tutkia myös Murmanskin alueen kalankasvatus-markkinat Karjalan tasavallan lisäksi, sillä se voi antaa kattavamman kuvan nykytilanteesta kalankasvatus-markkinoilla kuin pelkkä yhden alueen tilanne.

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Asiasanat
Markkinatutkimus, Venäjä, Karjalan Tasavalta, kassikehikot

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APPENDICES

1 INTRODUCTION

1.1 Study background

Ecofoster Group Ltd, (hereafter *Ecofoster*) is a company that has a range of operations, including consulting services, plastics manufacturing and specialized monitoring solutions. However, one of the company's operations, the manufacture of products from low pressure polyethylene, has not reached its full capacity. The production facilities of the company in the Republic of Karelia do not operate at full capacity. Ecofoster is therefore constantly looking for new products which can be produced at the production facility. Moreover, the portion of sales in Russia is only small part of Ecofoster's total operations, and the company wants to maximize its own potential and fully exploit the available market.

The Managing Director of Ecofoster, Mr. Jaakko Seppälä, has many contacts in the business world, one being the company PK-Muovi Ltd (hereafter *PK-Muovi*). PK-Muovi offers technical products made of plastic for industrial use, as well as specializing in the manufacturing of equipment for fish farming. Although PK-Muovi is an international company, it does not want to operate in Russia. In contrast, Ecofoster has several years of experience operating in the Russian market and is used to conducting business in Russia. Ecofoster has production facilities in Russia and can avoid certain bureaucratic issues such as custom declarations, as the produced goods are already in Russia.

The management of Ecofoster and PK-Muovi have agreed that Ecofoster can represent PK-Muovi in Russia. Moreover, Ecofoster can, where possible, manufacture part of the products made out of low pressure polyethylene at its production facilities in the Republic of Karelia. It was decided that the first product that Ecofoster would be able to manufacture at their production facilities would be a fish farming cage frame. Before starting this large project, the company decided to conduct a market research to minimize its own risks. The Republic of Karelia was chosen as the market area for several reasons: the large local water resources suitable for fish farming, Ecofoster's

production facilities are located there and it close proximity to Finland, where Ecofoster and PK-Muovi have their respective company headquarters.

1.2 Aims of the study

The aim of this study was to provide an overview on the fish farming market of the Republic of Karelia for Ecofoster. The main reason for conducting a market research before making any decisions is that Ecofoster does not have previous knowledge of the fish farming market. The purpose of this Bachelor's thesis is to provide relevant and detailed information to Ecofoster for making decisions if they want to start sales of fish farming cage frames in the Republic of Karelia.

This Bachelor's Thesis will answer three main questions:

1. How many fish farming cage producers are there in the Republic of Karelia – That is, what sort of competition can Ecofoster expect if it decides to enter the market?
2. Are fish farmers satisfied with the products currently offered?
3. Is the price-to-quality ratio of the currently available products sufficient enough?

1.3 Outline of the study

The study starts with the introduction of the topic as well as its motives and aims of the study. The first chapter also describes the case company. The second chapter gives an overview on the market area of the study as well as describing the fish industry of the Republic of Karelia and explains cage farming culture. The third chapter features the theoretical part of the thesis. The basic concept of business-to-business marketing is described, and special features of doing business in Russia are pointed out. Additionally, the process of the current market situation analysis is revealed. The next chapter consists of the methodology part explaining in detail the research method used in this study, which in this case was a semi-structured interview conducted by telephone.

The fifth chapter is devoted to empirical findings of the thesis. This chapter provides information on the variety of cage frames used in the Republic of Karelia as well as current producers of cage frames in the area. Moreover, the chapter gives an overview on the future development of the fish farming industry in the Republic of Karelia and its problems. The chapter also suggests the best way of promoting products among fish farmers as well as analysing weaknesses, strengths, threats and opportunities for Ecofoster Group Ltd. in comparison to the fish farming industry. The last chapter presents conclusions with the future research propositions as well as including a few points of doing market research in the Russia.

1.4 Case company Ecofoster Group Ltd

Ecofoster Group Ltd, was established in 2007 when three companies: Ecofoster Ltd, EHP-Tekniikka Ltd and Finnterrus Ltd joined in one group. The reason behind this joining was to accomplish a synergy which could not have been achieved by the companies separately. The head-office at that time was chosen to be in Oulu. The company also has two offices in Russia: Kostomuksha and Murmansk.

The first company which is a member of Ecofoster Group Ltd is Ecofoster Ltd. The core business of this company is as a consultant service which includes expert services, project management, civil engineering, waste management and special knowledge of North-West Russia. The second company is EHP-Tekniikka Ltd, which specializes in environmental and process monitoring, offering both monitoring solutions and services. For example, by using EHP-Tekniikka Ltd equipment, environmental conditions such as water level, flow, quality, pH, velocity and many other parameters can be wirelessly monitored in rivers, pipelines and other bodies of water.

The third company is Finnterrus Ltd, which imports to Finland products made of PE-plastic by its subsidiary company Alhola Co Ltd. The Alhola company is located not far from the city Kostomuksha in Republic of Karelia. The main customers of Finnterrus Ltd in Finland are enterprises such as peat producers, who, for example, buy sieve tubes for helping to filter ground water. Products of the Alhola Company are also

sold in Russia, but the customer base is mainly private persons who buy e.g. pontoons, septic tanks and many other custom made products from PE-plastic.

2 THE REPUBLIC OF KARELIA AS A MARKET AREA

2.1 Overview of the Republic of Karelia

The Republic of Karelia is a part of the North-West Federal District of the Russian Federation. The territory of the Republic of Karelia covers 180,500 square meters - about 1% of the Russian Federation territory. The Republic of Karelia also has the longest land border with a member of European Union, Finland, at almost 700 kilometres. The population of the Republic of Karelia, registered in January 2011, is 644,200 people with the average population density of 3.6 people per square meter. The proportion of the urban population is 78.1% and people of working age constitute 63.2%. (Government of the Republic of Karelia 2011.)

In the Russian Federation, the climate conditions of the Republic of Karelia are compared to the far north. It has an added effect on particular factors of the economy and social environment, leading to a higher than average cost of living and production costs. The most important indicator of economic development in the Republic of Karelia is the gross regional product (GRP). In the period from 2005 to 2010, the GRP of Karelia has been growing, except during the global financial crises in 2008 to 2009. In 2010, the GRP of Karelia was estimated to be 3.22 billion Euros, with a growth of 8.5% compared to 2.63 billion Euros for the year 2009. The growth in GRP for 2010 is attributed to the recovery of industrial production, increase of profits, reduction of unemployment and increase in incomes. (Government of the Republic of Karelia 2011.)

In 2010, volume index of industrial output in Karelia was higher than in Russia in general. Furthermore, among regions of the North-West Federal district it was ranked in fifth place. Two-thirds of industrial production of Karelia is exported. Important industries in the regional economy of the republic are wood processing and the production of wooden items, mineral extraction, chemical industry, textile, machinery and equipment production. Although the forest industry stands out as the main industry of Karelia, the mining industry is seen as a promising and growing sector. Railway

transport is also an essential part of the republic's economy, due to long distances and bad roads. (Government of the Republic of Karelia 2011.)

The food and beverages industry, as well as non-metal mineral products manufacturing and the metal industry, are less productive. Gas, electricity and water production and distribution are also weak areas in the region’s recent development (Government of the Republic of Karelia 2011.)

In 2010, the most beneficial industries for foreign investment in the region have been process industries, forestry and minerals extraction. The main investing countries were Finland (57%), Estonia (21%) and Sweden (13%). The Finnish investment was mainly in the process industries. The total investment figure was around 480 million Euros (2010). (Karelia State Statistics Committee 2011.) According to the Minister of Economic Development of Karelia, capital investment increased to about 570 million Euros in 2010. This was 114.8% compared to the level of 2009. (Government of the Republic of Karelia 2011.)

The most important natural resources of the republic are the forests, minerals, water and recreational resources. Furthermore, the region is rich with building materials: granite, toadstone, quartzite, dolomite, marble, iron ore, titan magnetite and specula stone. More than 49% of Karelian territory is covered with forests, which greatly impact the industry of Karelia. In 2010 the forestry share of total industry production accounted for 27%. The republic’s forestry products have a major share of the Russian market. Karelia maintains a leading position in the production of paper (21.1% share of the total production in the Russian Federation in 2010), paper bags (more than 61%) and wood cellulose (18.1%). (Government of the Republic of Karelia 2011.)

Karelia also boasts bountiful water resources - almost 25% of the territory is covered with water. Karelia has direct access to the White Sea and is a short distance from the Barents Sea, through the Murmansk region, and from the Baltic Sea through the Leningrad region. Additionally, Karelia's water resources include access to the two largest lakes in Europe: Onega and Ladoga. (Government of the Republic of Karelia 2011.)

2.2 Fish industry in the Republic of Karelia

This chapter describes the fish industry of Republic of Karelia. The main sources of information used in this chapter are two reports issued by the Government of the Republic of Karelia*: Program of socio-economic development of the Republic of Karelia up to 2015* and *Program of socio-economic development of the Republic of Karelia up to 2020.*

More than 61,000 lakes, around 27,000 rivers and 29 water reservoirs are found throughout the Karelia region. The Republic of Karelia's waters resources, also boast the two biggest lakes in Europe with 80% of Lake Onega and 40% of Lake Ladoga. The total surface area of lakes and flooding area during reservoir formation is 18,800 square kilometres.

The fish industry of Karelia consists of four distinct areas: sea fishing, inland commercial fishing, inland recreational fishing and fish farming. A total volume of 85,000 tonnes of fish is produced as follows:

- Almost 70,000 tonnes of fish is acquired by fleet fishing in the North Atlantic and off the coast of the Barents Sea.
- Commercial fishing of inland waters produces around 2,500 tonnes of fish.
- Recreational fishing annually produces 16 tonnes.
- Fish farming provides 17% of the total production of the fish industry.

(Nord-News 2011)

The climate conditions of Karelia are highly favourable for the development of fish farming. The temperature range varies from 16 to 20 °C in the summer, which is the optimal environment for fish farming. Thus Karelia produces 70% of the rainbow trout produced in the whole of Russia. (Nord-News 2011.)

The fish industry of Karelia started quite recently in 1994, initially producing only 400 tonnes of fish. From there, the industry has been rapidly developing. The reason for the high rate of development of cage fish farming in Karelia is the economic efficiency of production, rapid results and favourable natural conditions of Karelia. Nevertheless, the years 2009 and 2010 were not favourable for fish farming, due to the high temperatures

of the summer. The fish do not eat during hot weather, and therefore fish farms are not able to grow fish to the regulated size. The result was loss of income in the region of 2,000 tonnes of fish.

Currently, the increase of volume of fish farmed in Karelia is mainly due to the intensive caged cultivation of rainbow trout. The best location for cage fish farming is an area with protection from wind, such as areas of north-west lake Ladoga and the elongated bays of lake Onega. Therefore, cage fish farming is mainly concentrated in the southern regions of Karelia – Onega and Ladoga provide up to 80% of all grown trout in Karelia. However, fish farms are also located in the central and northern parts of Karelia on medium-sized lakes, reservoirs and rivers. Significant potential for new trout farms exist off the White Sea coast. Scientific research confirms that the growth of trout in a marine environment has a number of advantages over fresh water cultivation.

In 2012, according to the Ministry of Agriculture, Fish and Hunting of the Republic of Karelia, 52 fish farms operated in the region. Rainbow trout was mainly grown. In 2011, 13,200 tonnes of fish were grown. The capacity of all fish farms in Republic of Karelia is 45,800 tonnes. The government of Karelia has appointed the Ministry of Agriculture, Fishing and Hunting of the Republic of Karelia to develop a plan for the development of fish farming by 2015. According to the programme, in 2013, farms need to raise 16,500 tonnes of fish and fish-fry and to increase these figures to 20,000 tonnes by 2015. (Nord-News 2011.)

These goals, however, will not be easy to achieve, due to a lack of several important resources required for fish farming: First, there is lack of fry fish. The fry fish is a young fish, which is bought or breeded by the fish farm for the purpose to growing full grown fish. At the moment fry fish are either produced partly by the farm or, as in the majority of cases, bought from Finland, Murmansk or the Leningrad region. Another major issue is the lack of an efficient domestic production of fish feeds. The solution to the problems as well as the development of the fish farming industry in Karelia is carried out in different directions: opening of new fish farms, expanding capacity of existing fish farms, building factories for fry breeding and fish processing facilities. To

help solve the problem of fish feed, the Kondopoga bakery intends to build additional facilities for the purpose of producing fish feed.

The lack of fry fish is to be partly solved by the trout farm OOO “Virta”, located in the Lahdenpohja region, which built a new incubator for breeding of fry trout in 2011. This has been achieved through government cooperation. The project is expected to be ready in 2012 and total investment will be 502.8 million rubbles. The plant production capacity will be 12 million fry trout and will create an additional 20 new jobs. Additionally, by 2013, trout farm OOO “Ladozhskaja forel” will build a new trout farm with a production capacity of 3,000 tonnes of fish a year, including an incubation facility and fish processing facilities. The total investment will be 12.8 million Euros.

Many new fish farms have been opened in 2011 and several are expanding their operations. In the Louhi region, the trout farm OOO “Sedlezkie” is expanding its operations, in the Medvezhiegorsk region a new fish farm OOO “Onezhskaya forel” was established and OOO “Russkaya krepost” is getting familiar with a new fishing area at Lake Vanchozero. In the Sortavala region, in 2011, a new fish farm OOO “Laviyarvi” started its operations. In the Segezha region, the fish farm OOO “Segozherskoye” has built new fish processing facilities. ZAO “Kala-Ranta” is expanding its operations by building new facilities and repairing existing ones. The project budget of ZAO “Kala-Ranta” is 100 million rubbles with the implementation period 2011-2013.

In the majority of cases, the state support of investment projects is mainly implemented in facilitating access to credits for fish farms. Additionally, fish farms are currently able to apply for grants from the budget of the Republic of Karelia. In other words, industrial fish farms can receive partial reimbursement of the cost of interest on investment loans received from a Russian credit organization for the purchase of feed, fry, machinery and equipment.

2.3 Cage farming culture

In cage farming culture, fish are raised for commercial use in one of four culture settings: open ponds, raceways, tanks, or cages. In cage farming, fish are raised in a

cage or basket, enabling water to pass freely between the fish and the pond, while utilizing existing water resources. The origins of cage culture are uncertain, but it is believed that the first cages were used by the fishermen for fish holding before taken it to the market. (Masser 1988, 1.)

Cages can be in a variety of shapes, such as rectangular, square, cylindrical or polygonal. The specific shape used is usually determined by the climatic conditions of the region, reservoir characteristics and types of farmed fish. A fish cage can be described as a floating frame to which is attached a net, which hangs freely in the water. A cage can be easily constructed by the fish farmer by using barrels or pipes for the floating apparatus, wood for the footboard, and wires and ropes for holding the cage in place with the help of anchors and nets. The cage can also be purchased as a ready package or in separate packages for the cage frame and the net. It is important to have a good quality and strong cage frame and net, as breakage of the frame or tearing of the net will lead to the loss of fish and therefore the loss of money.

Masser (1988, 1-2) listed a few main advantages and disadvantages of cage farming. The fist advantage is that fish can be kept in different types of aquatic environments such as lakes, reservoirs, streams, and rivers which would otherwise not be possible. The initial investment in cage farming is low, enabling to try fish culture without unreasonable risks. Cage farming can be implemented even in the same ponds where sport fishing or the culture of other species is practised. Furthermore, harvesting as well as observation and sampling of fish is simplified.

One disadvantage of cage culture is that taking care of fish is labour intensive. The fish cannot get nutrition on their own, as they stay in one place, the fish require a source of good quality and fresh nutrition that includes all necessary ingredients. Furthermore, in crowded and confined cages, sufficient aeration of water is required. If these issues are neglected the fish can get diseases which need to be identified and treated rapidly. Another disadvantage which Masser (1988, 2) points out is vandalism or poaching, due to cages usually being located in remote locations with low security.

One important issue in cage fish farming which should be taken into consideration is that the capacity of open water recourses for fish growing is limited. The area of fish

cages should not exceed 0.1% of the volume of the reservoir or else the reservoir risks being polluted with organic substance. In other words, dense fish farming and intensive feeding will lead to the progressive eutrophication of the reservoirs. (Masterskaja svoego dela 2012)

3 THEORETICAL FRAMEWORK

This theoretical frame work consists of two parts: The first part describes business-to-business marketing in general as well as the main specialities of the business-to-business marketing in Russia. The second part deals with an analysis of current market situation.

3.1 Business-to-business marketing

Business-to-business (B2B) describes a commercial transaction between two companies or organizations, which can be, for example, a manufacturer and supplier of raw material or wholesaler and retailer. The B2B market is bigger than business-to-customer (B2C), due to B2B markets having a greater number of stages a product has to go through from the beginning to the final customer when compared to B2C markets (Kotler, Wong, Saunders & Armstrong 2005, 30). In the B2B markets the number of customers and suppliers is far fewer; however, they are far larger buyers as well as the fact that the buying process is more professional and systematic. Therefore, all purchases are planned and budgeted strictly in advance and then followed-up. (Isohookana 2007, 82.)

In consumer markets the company takes an active role in selling their product, but the customer is relatively passive in this process. The consumer customer can either choose to purchase the product or not, usually having a little contact with a producer. Communication between the seller and commercial customers is, in contrary, more interactive and personal than when selling to consumers. (Ford, Gadde, Håkansson, Lundgren, Snehota, Turnbull, & Wilson 1998, 4.) Therefore, the established relationship between companies is usually intended for the long-term.

Marketing in consumer markets does not normally have interaction with consumers, but with commercial markets, the opposite is true. In commercial markets, parties have a closer relationship, and business marketing can easily be involved in all stages of the

buying process of their customers – from determining the problem to solving the problem, as well as assisting in after-sales operations. (Kotler et al. 2005, 305.)

B2B-market products are not intended for personal use, and the purchases are driven by a need for the service or product. Moreover, before purchasing products, the product must meet the requirements of several people involved in the buying decision of the company, which requires an active search for the right supplier. The actual decision making and purchasing of goods can take several months or even years in organisational markets. In cases where the product or service is complex, the buying process can require more detailed negotiations regarding price and features of products and may involve competitive bidding and complex financial agreement. Another time consuming issue is the size of purchase. However, in the B2B market, the size of purchase does not always equate to a large quantity of products, but can include only one product. Nevertheless, the price for only one item can be millions of Euros. This is another reason for more interactive relationships between B2B companies. (Solomon M. Marshall, G., Stuart, E., Mitchell, V. & Barners. B. 2009, 188-189.)

Geographical concentration is another difference between commercial and consumer markets. The geographical location of commercial buyers is usually concentrated in a small geographical area, which means that marketing can concentrate on marketing work and even locate distribution centres nearby. (Solomon et al. 2009, 189.)

The business demand is driven demand – taking its root either directly or indirectly from consumer demand. As the result of the driven demand, the company, even from another industry, can determine the success of another company. Many commercial markets also have inelastic demand, in which case the fluctuation of price does not affect customers' purchase behaviour, especially in the short run. (Solomon et al. 2009, 190.) The drop in the price of just one of many parts will not cause the customer to purchase more, unless it results in the lower production costs. (Kotler 2005, 305.) Nevertheless, B2B demand is not always inelastic. In some cases demand can become elastic when a product or service consists of only a few materials, and the increase of price is directly reflected in the price for the consumer. (Solomon et al. 2009, 190.)

Furthermore, business markets have a greater fluctuation demand. Even a small change in the consumer demand can create multiple increase or decrease in business demand during the next period. Another reason for the fluctuation of demand is a product's life expectancy. In some businesses certain types of products are bought infrequently, in cases where, for example, the expected life of a product is ten years. Thus, demand for this product fluctuates depending on when the product was bought. To keep production more constant, businesses can have campaigns or price reduction to advance the purchase of the product. The last demand type is a joint demand, where the product consists of two or more parts and when availability of one part becomes limited, the production of the end product becomes limited. (Solomon et al. 2009, 190.)

Main influences on organizational buyers

Several factors influence the organizational buyer. They can be divided into four main areas of influence: environmental, organizational, individual and interpersonal forces (Kotler et al. 2005, 311). By understanding these factors the marketer can have a successful base for marketing strategies. Moreover, the marketer is able to identify cost-effective market segments, reach organisational buyers, and respond efficiently to their needs. (Hutt & Speh 2012, 41-42.)

As Lyson and Farrington (2006, 422) state, *environmental factors* are generally outside the buyer's control and include a level of primary demand, economic outlook, interest rates, technological change, political factors, government regulations, and competitive development. By following these factors a marketer can evaluate how they are going to influence the buyer, and try to turn these challenges into opportunities (Kotler et al. 2005, 312).

According to Kotler et al. (2005, 312), business marketing needs to understand *organizational factors* of a company, due to the company's organisational structure, objectives, policies, procedures and systems varying from company to company. Internal organizational factors provide the marketer with the information who and how many people are involved in decision making and what their criteria are.

Since decisions in the majority of cases are made by several people, *interpersonal factors* need to be also taken into account. These factors include authority, status, empathy and persuasiveness. Interpersonal factors and group dynamics are often difficult to determine. The decision maker does not inform outsiders of their own authority. Moreover, the decision maker in the company is not always the person with the highest rank, but the person who is most respected, has certain expertise, control rewards or then a special relationship with key decision makers. (Kotler et al. 2005, 316.)

Each participant of the buying process has different personal motives, perceptions and preferences that are affected by personal characteristics. These characteristics or *individual factors* can include, for example, age, income level, job position, level of education, personality and attitudes towards risk. Furthermore, buying styles vary from person to person. One decision maker may analyze in-depth several proposals before making a decision, but another is an intuitive negotiator, who is able to tender sellers against one another for the best deal. (Kotler et al. 2005, 316.)

Organizational buying situation

The organizational buyer may require more time and effort on some purchases than on others; this usually depends on the complexity of the product and how often the decision has to be made. (Solomon et al. 2009, 193.) The quantity of decisions directly depends on the type of buying situation. There are three different types of buying situation: straight re-buy, modified re-buys and new-task buys. (Kotler et al. 2005, 307.)

In a straight *re-buy*, the purchase of the goods is handled on the routine basis, when the supplies get low. This purchase does not require from the buyer much time. All organisations keep a list on the reliable suppliers that have proven their ability to meet a company's criteria for pricing, quality, service and delivery. In this situation, marketers go to great extents to keep the customer, due to re-buy customer generate the main revenues a company needs to maintain a steady stream of income. (Solomon et al. 2009, 193.)

In the *modified re-buy* situation, the buyer wants to switch to a new supplier with better prices, quality, or delivery times. This can also occur when the organization has a need for product with additional specifications. Modified re-buys is more time consuming, but this can also mean that new suppliers can be added to company's list at the same time when others can be dropped. That is why a marketer needs to keep constant contact with a customer to detect and define problems before loosing the customer. (Solomon et al. 2009, 193.)

A company buying a product or service for the first time faces a *new task situation*. In a new task situation the organization requires set of decisions before the actual purchase. As the cost of risk of the product increases, the number of participants in the decision making increases as well, as it requires greater effort to search for the information. A customer's new task buying situation provides both a challenge and an opportunity to the marketer. (Kotler et al. 2005, 308.)

Organizational buying behaviour

The organizational buying process traditionally involves eight stages. In a new task buying situation, organizations go through all stages of the buying process. In the other two situations, organizations may skip a few of the stages. The stages are:

1. Problem recognition
2. General need description
3. Product specification
4. Supplier search
5. Proposal solicitation
6. Supplier selection
7. Order-routine specification
8. Performance review

(Kotler et al. 2005, 317-320.)

The first stage in the organizational buying process begins when someone recognises a problem or a need that can be solved by acquiring a specific product. Both internal and external factors may generate problem recognition. An internal factor may be, for

example, a case where a machine breaks and requires new parts. An external factor could be, for example, that management wishes to explore a new idea which has been generated by a partner company. As the problem has been recognised, the company must define needs for the product as well as describe characteristics and quantity of needed item. The organization, depending on the complexity of the product, will negotiate with the specialists on the desired attributes for the product. In this state, active marketing may influence specialists to choose characteristics of the product which improve the likelihood of that product being chosen. (Kotler et al. 2005, 317.)

After identifying the product that meets their requirements, the company needs to find all alternative suppliers of the product. If the product is more complex, it will take more time for the researchers to find all alternatives. Today, the Internet is probably the widest search tool providing equal opportunities for both for large and small suppliers to be noticed. A supplier must be visible in the important places of the industry as well as have a good reputation in the market if it wants to be considered among others suppliers. (Kotler et al. 2005, 318.)

In the next stage, the buyer acquires and analyses the proposals from the potential suppliers. The company scores suppliers according to the drawn up list of desired attributes for the suppliers and one or even several of the highest scored suppliers will be chosen. As the supplier is chosen the company draws up an order-routine specification, determining the final order and its special features such as technical features, quantity of product, delivery schedule and so on. (Kotler et al. 2005, 319-320.)

The final step of the buying process is a performance review. In this stage the buyer will evaluate the satisfaction with the supplier and the order implementation, while deciding whether or not to continue with the same supplier. Therefore, an essential part of marketing is to ensure the positive impact of the product experience. A positive attitude towards the product affects the image of the supplier organisation and eventually may lead to new sales with the same customer. (Rope 2004, 24.)

Organizations in a re-buying situation may skip some stages of the buying process, depending on the organization involved, the type of industry and complexity of the

purchasing situation. The buying process may also change as a result of changes in the external or internal environment. For instance, a change in economic situation or organizational structure may lead to changes of the buying process; however, the eight stages of the buying process sufficiently describe an overall situation of the organizational buying process. (Hutt & Speh 2012, 42.)

Marketing communication has an important influence on the business buyers while they are making a buying decision. A good marketer is familiar with the buying process of the company and is able to offer information at each step of the buying process. As business buyers are subject to influence when they make their buying decisions, it is important for the marketer to be trustworthy and provide suitable customer service and terms of business for the customer. When the supplier is familiar, this plays an important role customer service, the availability of the product, on-time deliveries and the products offering as a whole. If the supplier is unfamiliar, the company gathers information on the supplier from associates and the web pages and also contacts the supplier. Therefore, marketing communication should be organized in an efficient way that the right information is in the right places at the right time. (Isohookana 2007, 83.)

3.2 Business-to-business marketing in Russia

Business relationships are influenced in each country by customs, traditions and culture. Among the most influencing factors are religion, values and ideology as well as the individuality of a nation and of a person. Russian people are collectivists, have a high power distance as well as tend to be centralised, which is highlighted in the importance of relationships. Therefore, B2B marketing in Russia is more on the personal level. An emotional component can become the most important factor in the decision making, and furthermore many decisions are made (or not made) based on emotions. In the majority of cases a company operates with another company that they have known for a long time or were introduced through personal connections. Thus, effective personal selling as well as networking is vital in Russia.

In Russian companies, decision making takes place at the top of the organization. The middle managers rarely have any power to make decisions or the decisions need to

always be approved by the executives. When making decisions on the specialized products, executives consult specialists in the company; nonetheless, the end decision is made by the executives. The biggest reason for delay in decision making in Russia is that the decision has not been put in front of the real decision-maker. Therefore, the marketers should contact the top of the organization, if possible, to have a chance to succeed.

In Russia, the top of the organization expects to be negotiating with people of an equal position. The negotiations are mainly for information exchange and actual decision are made in the small, informal meetings. Once the relation is established it is important to maintain it, because culturally, Russians can be wary of strangers and the relationship-building process can be very long.

3.3 Analysis of the current market situation

The first stage of an evaluating decision concerning entering a new market is the analysis of the current market situation. This involves an evaluation of the internal and external factors of the company. The information obtained from the analysis acts as a basis for the SWOT analysis in which the main strengths, weaknesses, opportunities and threats of the organization are identified. (Wood 2004, 39-40.) The main objective of the analysis is to gain an understanding of the target market that the company is entering; it involves determining what kind of demands, problems and opportunities characterize the market. Furthermore, the information is used as a guideline for the future marketing decisions. (Parmerlee 2000, 11.) In many cases, when talking about analyzing the market situation, the term market auditing is used; this can be divided into two variables: an internal audit and an external audit. (Wood 2004, 40.)

Internal audit

According to Wood (2004, 41), internal auditing consists of controllable variables such as organizational resources and operations, capabilities, previous performance, business relationships and key issues. In an internal audit, a company evaluates its own marketing performance. It is vital for the company to make a detailed sales analysis,

analyse market shares and profit contribution, together with an assessment of the efficiency of the company's marketing mix and marketing control plans and procedures. By doing this analysis a company can determine its strengths and weaknesses and address them. (McDonald 2008, 41.)

External audit

An external audit consists of uncontrollable forces such as political and legal, economic, social, cultural and technological factors. These factors can be analyzed by using a PEST analysis, due to the many variations of the PEST model; they also include other factors in addition to the four main elements. However, Smith and Raspin (2008 63, 68), emphasize that a PEST analysis should contain only relevant information for the companyThe information gained from an external audit can help organization avoid the threats and take advantages of the opportunities (Kotler et al. 2005, 69).

SWOT analysis

As McDonland (2005, 60) states, the SWOT analysis enables company to identify the key components of marketing information from the vast amount of data generated by the audit. Therefore, the SWOT analysis is a summary of a company's key strengths, weaknesses, opportunities and threats drawn from the marketing audit. The term strengths includes the internal capability of the company to achieve its objectives, explore opportunities and defend itself against threats. Unlike strengths, weaknesses prevent the company from achieving the objectives as well as complicating the effective exploration of opportunities and threats handling. (Wood 2004, 41-43.)

The organization can affect its own strengths and weaknesses, but opportunities and threats cannot be changed from within the organization (Wood 2004, 41-43). However, the organization needs to analyze the threats according to the potential damage each could do and make necessary plans to meet them. As they include risks, opportunities can also be seen as threats; therefore, an organization needs to evaluate the best suitable opportunities of the organization. Moreover, a trend or development can be an

opportunity to one company while simultaneously a threat to another. (Kotler et al. 2005, 58.)

The purpose of the SWOT analysis is to match the company's resources to the opportunities the environment offers, while trying to turn weaknesses into strengths and finding ways to minimize the exposure to threats (Kotler 2005, 58-59). However, the duration and significance of the factors and trends arising from the environment is difficult to estimate, and the situation may change unpredictably fast (Wood 2004, 40-41). Nevertheless, a SWOT analysis is a fairly simple tool which is able to provide a fast and easily understandable review of strategy.

4 RESEARCH METHODOLOGY

A market research consists of four main stages: definition of the research problem and research objectives, development of the research plan for data collection, implementation of the research plan as well as interpretation and reporting of the findings (Kotler et al. 2005, 344).

The aim of this research is to find out if there is a demand for a new producer of fish farming cages in the Republic of Karelia. What kinds of fish farming cages are offered at the moment, and are the fish farmers satisfied with the quality of fish farming cages? By answering these questions a company can decide whether they want to start selling fish farming cages in the Republic of Karelia.

There are two types of information used in the research. The first type is secondary data, i.e. the information that already exists and has been collected for another purpose (Kotler 2005, 346). The secondary data for this research was found through internet sources.

The majority of information was found from four main sources. The official web-pages of the Ministry of Agriculture, Fish and Wildlife of the Republic of Karelia provided information on the fish industry as well as information on the fish farmers. Additionally, general information on the Republic of Karelia, articles and statistics were found from the web-pages that the Republic of Karelia for Investors and web-pages of the government of the Republic of Karelia gave. These web-pages also provided an overall picture on the Republic of Karelia and fish farming in general.

The last, but maybe the most important source was a Zonafish forum, which is an independent international fish industry forum. Discussions between everyone in the fish industry (mainly Russians), e.g. fish farmers, producers of equipment and state officials can be found in the forum. It provided the information on the problems of the fish industry in the Republic of Karelia as well as problems with fish farming cages.

The second type of information is primary data. Primary data refers to new data which is usually not publicly available and is collected for a specific purpose. The most common way of collecting data is through qualitative, quantitative or observational research. Primary data was especially important for this research, as there is not currently enough available information from the secondary sources. In Russia information is generally hard to obtain, especially when research is performed from another country. The Internet is still not as widely used in some part of Russia as in the Western countries.

In observational research information is gathered by observing relevant people, actions and situations. This method is used in cases when the people are unwilling or unable to provide the necessary information. Generally, this method is used along with another data collection method, as some information such as attitudes and motives are not possible to observe. (Kotler 2005, 348.)

In qualitative research a small sample of people is measured to examine the motivations, attitudes and feelings, all with the purpose of understanding another person's view. Qualitative data is collected so that a researcher can know more about issues that cannot be directly measured or observed. Contrarily, quantitative research provides statistics from a large sample of people. It measures certain aspects of a market such as a market size, brand awareness and purchase frequencies, to name a few. (Kotler 2005, 414.) Quantitative research is a more preferred research method in cases with large sample group, due to result in qualitative research depends on the subjectivity and interpretation of the researcher based on sample group. Furthermore, qualitative research is cheaper to implement.

A qualitative research method was chosen for this research due to the nature of the project. There are a limited number of potential customers in the Republic of Karelia i.e. the sample group is small. Therefore, interviews were chosen to be the means of obtaining data. An interview is the most commonly used method of qualitative research – the flexibility of it makes it attractive. The interview can be structured, semi-structured or unstructured. A semi-structured interview was determined to be appropriate. More specifically, the author decided to implement telephone interviews, as fish farms are not concentrated in one place. The questions of the interview are

presented in Appendix 1 (translated in English) and Appendix 2 (in Russian). To organize face-to-face interviews, it would be too expensive and difficult to organize a meeting in a favourable order and at a suitable time for everyone. Additionally, postal questionnaires are not possible in Russia and were therefore not even considered. This would have required much more effort than the author imagined most Russians are willing to do. E-mail questionnaires provide the same problem. Additionally, there is no available information on the companies' e-mails addresses, due to the fact that the majority of the companies lack their own web-pages.

The information on the companies to be interviewed was found from the web-page of the Ministry of Agriculture, Fish and Wildlife of the Republic of Karelia. The page listed trout farms operating in the Republic of Karelia. A list of the companies is visible in Appendix 4. In total there were 52 companies; however, 7 companies did not have a contact number and the author was not able to find them. Therefore, 45 companies were contacted. Some of the companies refused to answer the questions or were unreachable, but 14 companies agreed to answer the questions. The interviewed companies were both small and large. In the majority of interviews a managing director of the company was interviewed. 5 interviews were carried out during the spring of 2011 and the remaining 10 interviews during the autumn of 2012. Additionally, the managing director of the association of trout farmers in the Republic of Karelia was interviewed. Although there is a long period between interviews, the researcher believes that the information received in spring 2011 is still valid at the moment.

5 EMPIRICAL RESULTS

The empirical section will describe the four main issues of this thesis. The first part describes what kinds of fish farming cages are currently used in the Republic of Karelia. The second part will seek answers to the competition situation in the Republic of Karelia. The third part will deal with the present and future of the cage farming industry, including its current problems. In the last part the author conducts a SWOT analysis of the company Ecofoster in comparison to the cage farming industry in order to more appropriately evaluate the profitability of beginning sales of fish farming cages in the Republic of Karelia.

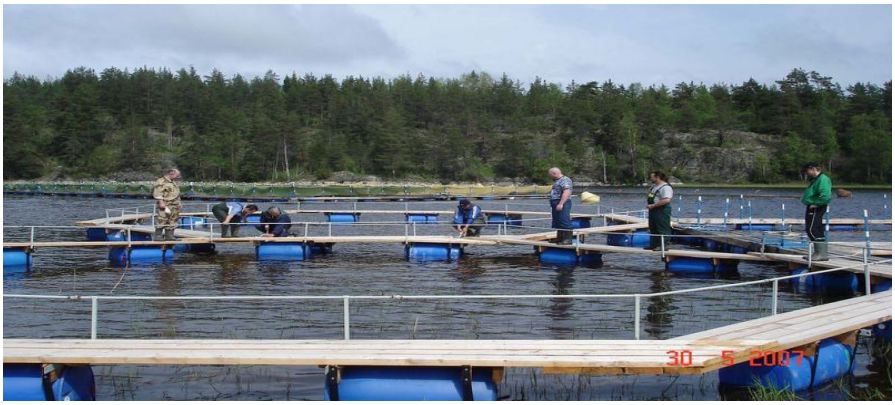
Empirical results have been gathered through telephone interviews in spring 2011 and autumn 2012. In addition, an important secondary source, namely the Zonafish forum, was used in evaluating problems of fish farming industry. In this part, instead of writing the names of interviewed companies, the author will refer to companies in the text as company 1, company 2 and so on. The name of the company as well as those of the interviewees can be seen in references under “Interviews”.

5.1 Fish farming cages in the Republic of Karelia

Cages can be in a variety of shapes such as rectangular, squire shape, cylindrical or polygonal. The information on what kind of fish farming cages are used in the Republic of Karelia was gathered by interviewing fourteen fish farms. In Karelia cages are mainly rectangular, square or polygonal in shape. In polygonal or squire shaped cages, the area of the cage is used more efficient than in rectangular cage. Nevertheless, it is easier to make cage groups with rectangular cages.

Fish farmers can produce cage frames by themselves or just purchase them. Six fish farms (companies 1, 6, 7, 9, 13 and 15) from the interviewed group made their own cages. Self-made cages are made of barrels (Picture 1) or a low pressure polyethylene pipe (Picture 2) as a floating system for a wood or metal frame which then supports

walkways made out of wood. These cages are usually polygonal or rectangular in shape, which facilitates adjoining cages to one another.



Picture 1. Fish farming cages on barrels (Zonafish 2011).

Picture 2. Fish farming cages on pipes (Zonafish 2011).

The advantages of using self-made cage frames on barrels is that costs are relatively low, frames are easy to make, install and maintain. Mr. Prohorov from Company 9 also pointed out that cage frames with walkways made of wood are safer for employees to walk on while taking feed to fish. One disadvantage of this kind of frame is that it lasts only for 4 to 10 years. They additionally require continuous inspection and many small renovations. Furthermore, cage frames on barrels have a higher surface part (the part above water level), which increases the length of required net and therefore the costs.

Six interviewed fish farms (companies 3, 4, 8, 10, 11 and 14) have both purchased and made cages. The last two fish farms (company 5 and 12) bought all of their cage

frames. The self-made cage frames were made out of wood and barrels or low pressure polyethylene pipe. However, purchased cage frames were made entirely out of low pressure polyethylene pipes (Picture 3). The small cage frames 10 to 12 meters in diameter were self-made, but the big frames were purchased. Small frames were self-made, due to their assembly being easy and fast as well as their low cost. The bigger cage frames are harder to make and require more knowledge; therefore fish farms preferred to purchase them.

Picture 3. Fish farming cage made of low pressure polyethylene pipes (Zonafish 2011).

Cages made of plastic pipes are the most popular among fish farmers in the Republic of Karelia. Many fish farmers would prefer to have and purchase this frame, but the high cost is usually an obstacle; such a frame can cost almost ten times more than a self-made frame. The average price for a cage frame with a diameter of 22 meters costs approximately 300,000 rubbles, or 7,400 Euros. Even if a farm would like to have frames made out of plastic, it is not always possible. Mr. Mann from Company 6 pointed out that at his farm they would need to change all fish farming cages and the operation system, which would be too expensive. The only possibility of other options for cage frames is, in case of farm expansion, unlikely when this farm is already working at maximum capacity.

A plastic cage frame has many advantages. First the lifecycle of cage frame is over ten years and it is resistant to corrosion. Even though the construction of a cage frame is

light, it can be used in places with strong waves and fast currents, which cannot be said about frames made of metal or wood. Cage frames made of plastic pipes are flexible and resistant to extreme temperatures (- 60 °C to +100 °C). Nevertheless, this structure has also disadvantages: the installation of the frame requires specialized equipment, the repair process is rather complicated and the frame needs to be gathered on spot, which complicates transportation in case when the frame needs to be moved to another location. Other problems with cage frames made out of plastic pipes are discussed more deeply in the next chapter.

Cage frames can be also made out of metal, but in the Republic of Karelia it is not popular due to some serious negative drawbacks. The cage made out of metal can be used only in the waters which do not freeze; moreover, the structure is big and heavy making transport and installation difficult. Furthermore, the rate of corrosion is high; this combined with the fact that over time the bottom part of cage frame becomes covered with plants makes them rather unattractive in Karelia.

5.2 Competitors in the Republic of Karelia

The interviews and secondary data determined that in the Republic of Karelia, basically three producers are selling cage frames. Two producers, OOO “RusProektStroi” and OOO “Fish Plast” and one other producer is from the Murmansk region ZAO “Arktik-Salmon” (See Appendix 3). Fish farms in the Republic of Karelia have also bought cage frames from Saint Petersburg, Finland, Norway and other places, but the three previously mentioned firms were the most used among interviewees.

ZAO ”Arktik-Salmon” was established in 1992 as a factory for the production of young fish (fry fish). The company has notably grown over the years. Now its operations includes fish farming, fish processing and additionally the company is able to establish new turnkey fish farms or supply new equipment for fish farms. All equipment and other necessary materials, which the company uses or sells is produced in Russia.

OOO “Fish Plast” was established by Grigorii Fedorenko, who moved from Belarus to the Republic of Karelia (Kondopoga region) in the nineties. In the beginning Mr.

Fedorenko only did commercial fishing, but as catch volumes started to decline he changed to making nets. Later Mr. Fedorenko began producing of cage frames. The advantage of “Fish Plast” as seen by the fish farms is that a company is able to make new cage frames from old frames already owned by the company, thus making a new frame for half the price and in a shorter time. Another advantage of the firm is that the managing director Mr. Fedorenko has a brother who owns a fish farm, which allows Mr. Fedorenko to test all his equipment at the farm. Moreover, potential customers are able to come to the farm of Mr. Fedorenkos brother and see for themselves the cage frames.

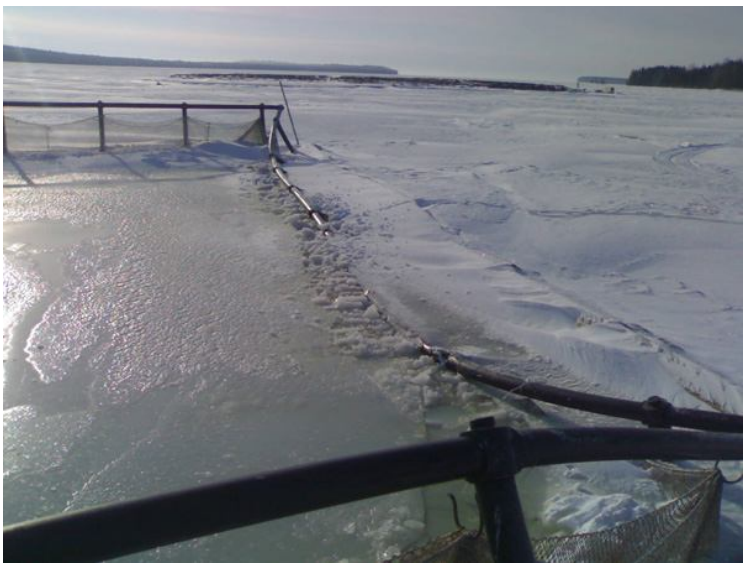
The second company which produces cage frames in the Republic of Karelia is OOO “RusProektStroi”. The company was established in 2003 and is located in Petrozavodsk. The main activity of the company is the provision of a full range of design, surveying and construction services during the implementation of the investment projects. Additionally, a company produces cage frames for fish farming, pontoons and pear, whish are made from low pressure polyethylene pipes. “RusProektStroi” also provides repair service for cage frames even if they are made by other producers.

Which companies occupies the leading position cannot be said, due to the fact that only one-fourth of fish farms in the Republic of Karelia use modern fish farming cages. Many of the respondents have bought cage frames from one company, but were not satisfied with them and so therefore changed to another company or in the end decided to produce cage frames themselves. All farms which have bought their cage frames have ongoing contact with the producer. Fish farms give feedback on the frames and producer depending on the ability to further develop the design of the cage frame.

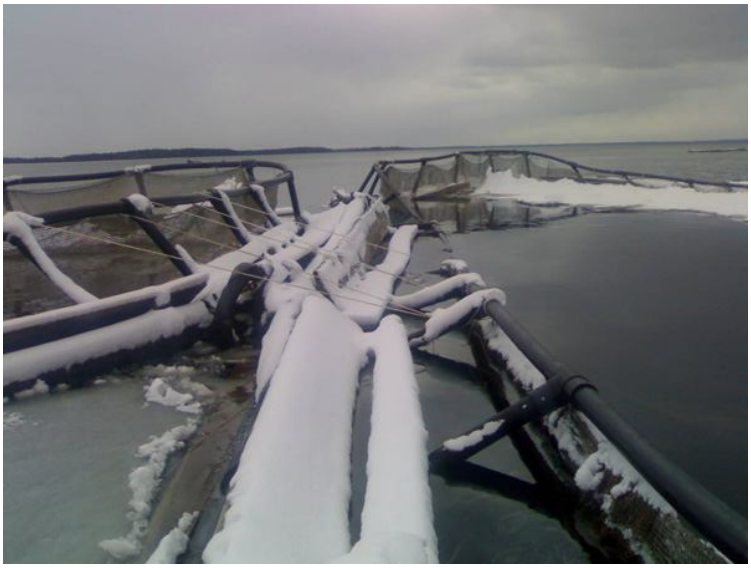
The opinion on whose cage frames are the best is also hard to determine, due to the fact that one farm did not like the frames of e.g. “Fish Plast” but liked the frames of “Arktik-Salmon”, while another farm liked the frames of “Fish Plast”, but did not appreciate the frame of “Arktik-Salmon”. Therefore, the opinion on whose cage frames are the best depends on the personal connection with the producer company (one’s good or bad experience with the company), and the location where the cage frame is used. As the interviewed fish farms are located on different bodies of water, the

conditions are also different. The best cage frame in one place is not necessarily as strongly suited for another.

When discussing the problems of the fish cages with the fish farms, the interviewees pointed out several problems in the quality of the cages. The problems were mainly the same with all producers. The majority of problems are connected with the low durability of cage frames. Mr. Vlasenko from Company 14 mentioned that problems arise especially during the autumn and winter when the net becomes heavier and freezes followed by the fall of the handrails inside (Picture 4). Moreover, while the handrails fall inside, walkways also tend to lean inwards, thereby endangering the safety of workers (Picture 5). Other problems with cages frames are weak hooks, weak handrail joints and brackets as well as complications with maintenance. It became apparent that cages need to be tightened at least twice a season; this is an extremely hard piece of work. The biggest problem of Russian cage frames seen by Mr. Vlasenko is that Russians took know-how from foreign cages, but made them from thinner plastic as well as made brackets from metal, which in combinational use with plastic tears parts made of plastic.



Picture 4. Fish farming cage during winter time (Zonafish 2011).



Picture 5. Fall of handrail of fish farming cage (Zonafish 2011)

5.3 Cage farming industry in the Republic of Karelia: its future and problems

The Republic of Karelia is an ideal place for growing fish due to its relatively pure ecology. The Republic of Karelia therefore grows 70% of the rainbow trout produced in the whole of Russia. In 2011 52 fish farmers produced 13.2 thousand tonnes of fish. The biggest producers and greatest contributors to the industry were OOO “Segozerskoe” (1625 tonnes), ZOA “Kala ja Marjapojat” (1443 tonnes), OOO “Ladozhskaja forel” (1284 tonnes) and OAO “Kondopoga” (889 tonnes). (The Official Karelia 2011.)

The future of cage farming in the Republic of Karelia varies, depending from whom is asked. For small fish farm it is becoming hard to survive, due to the fact that all tenders for new places for growing fish are taken by the large fish farms, and at existing water resources the capacity is already full. Large fish farms are meanwhile expanding, due to there is a capacity for growth as the total capacity of the Republic of Karelia is 45.8 thousand tonnes. New fish farms are opening almost every year and the existing ones are expanding. Existing farms are expanding their operations by opening new facilities for fry fish breeding and fish processing.

The authorities of the Russia and the Karelia Republic have not been provide much assistance for fish farmers. Nevertheless, in last few years' government started to pay more attention to the aquaculture and make plans for its development, as Russian aquaculture is underdeveloped. Russia produces only 0.2% of the fish produced in the whole world, despite great water resources. Therefore, some small help was offered to the fish farms in a form of subsidies, which allowed fish farms to take loans to purchase feed, fry, machinery and equipment. Upon the payment of the loan, the fish farms will receive the interest rate back. In 2011, the state has financially supported fish farmers with a total amount of 32.8 million rubbles (810,000 Euros). (The Official Karelia 2011.) Even though the government has begun to help, fish farms still require large investments to develop further. Only one-fourth of the fish farms uses modern cage frames and changing them requires high investments, due to the fact that new equipment is expensive not to mention the difficulties in obtaining a loan as well as high interest rates.

In the Republic of Karelia an important perceived problem seems to be the lack of good quality young fish and feed, which is why many farms need to purchase them from abroad or other far places. Furthermore, in the Republic of Karelia there are not enough fish farming specialists who know how to properly feed fish. This results in the need to lure the chief pisciculturist from one farm to another.

Global warming has also been causing problems for the fish industry. When the water temperature rises, fish stop feeding and do not grow to the required size for sale; this happened two years ago and caused notable losses. Norwegian salmon and Chilean trout as well cause problems for Karelian fish farmers, due to their low price. Especially now, after Russia joined the World Trade organization (WTO) , the prices for fish will drop even further, due to a looming drop in import duties. Moreover, in the result of joining the WTO, Russian producers of fish will be obligated to modernize and certificate the production as well as take into use new technologies. Higher production requirements will push small and dishonest producers out of the market.

5.4 Product promotion among fish farmers

Discussions with fish farmers also brought up the best way of promoting fish cages among fish farmers. The most effective promotional method of cage frames is to install frames at the farm and show frames in the real use. Several managing directors mentioned that before purchasing or making cage frames themselves they visit other farms and looked what others have. For example, cage frames of the company OOO "Fish Plast" are promoted at the fish farm IP Fedorenko.

Another good way of promotion is via product presentations at meetings of fish farmers, which are held at least once a year. Almost all fish farms are represented at these meetings, often including the decision makers of the fish farms. The management and employees of fish farms also value when a company contacts them personally, visits them and discusses with them their wishes and the problems they are having at the moment. By contacting companies personally, a company is able to contact with the fish farm even though the farm would have no need for the new products yet. However, if the contact has been already established a fish farm will consider the company first when the need becomes relevant.

5.5 SWOT analysis of Ecofoster Group Ltd.

A SWOT analysis is an important tool in evaluating a company's current situation in the internal and external business environment as well as in highlighting issues which could be further developed. Furthermore, a SWOT analysis will help the management of a company on making the decision of whether or not to start the production of cage frames for the Karelian market.

After revealing the results of the research, the author composed a SWOT analysis of Ecofoster (Figure 1). Each point of the SWOT aspect is further described.

Strengths:	**Weaknesses:**
- Partner PK-Muovi - Finnish know-how - Experience in the Russian market - Subsidiary in Russia - Location - Production facilities - Fast response to the changes - Low production cost - Individual approach - Monitoring solutions	- Experience in the fish industry - Small range of products for fish farmers - High price - No sales person in the Republic of Karelia - Lack of company awareness - Lack of specialized equipment for plastics processing - Finances
Opportunities	**Threats:**
- Fish industry still in development - Only a few producers - The ability to develop new products for fish farmers - Expansion to new geographical areas	- Small market - Small number of customers - Limited production of fish farms - Increasing price of raw materials

Figure 1. SWOT analysis of Ecofoster Group Ltd.

Strengths

The biggest strength of the company is its cooperation with the Finnish company PK-Muovi, which has a long history in the production of fish farming equipment (since 1990). PK-Muovi provides the know-how of the cage frames, which have been tested and been in use already several years. Therefore, Ecofoster has Finnish know-how both from its own experience as well as that of PK-Muovi. The Finnish brand is valued in Russia and it also brings company a little extra advantage. Ecofoster is not a large company. The company employs around 20 people and therefore is able to rapidly respond to all changes and have an individual approach to each customer.

Another important strength is the company's experience within the Russian market. The company employs several persons with a Russian background; additionally, the management has experience in operating in Russia. Furthermore, it is easy for Ecofoster to begin sales of cage frames in the Republic of Karelia, due to it already

having a subsidiary there company OOO “Alhola”. The location of production facilities of the subsidiary is also good, due to it is approximate location in the middle of the Republic of Karelia. Production facility is large and has capacity for operational growth. Russian workers are found at the production facility, a fact which enables the company to keep production costs low whilst maintaining a European standard of work.

Ecofoster stands out from the other companies with its special wireless monitoring solution it can offer to a fish farm. At the moment water quality, temperature and many other water parameters, which are extremely important in fish farming are measured by going personally to the water resource and checking each water resource separately. With the equipment offered by Ecofoster, fish farm employees are able to see on an office computer information from any water resource the fish farm monitors. Fish farms can for example monitor such parameters as temperature, pH or content of dissolved oxygen in the water and immediately act on the received information.

Weaknesses

The main weakness of the company is it lacks knowledge on fish farming. The company has no previous experience in the fish farming industry from either the Finnish or Russian side. Furthermore, a company cannot offer many other products for fish farms besides fish framing cages, pontoons, barrels and septic tanks. Other weaknesses include Ecofoster not having a sales person in the Republic of Karelia as well as the fact that the current number of employees would not suffice in the case of this growth in question. To find competent and responsible workers is not easy in the Republic of Karelia. The company will also need to purchase additional specialized equipment for plastic processing. This is not cheap and would require investments.

Ecofoster is mainly associated with its consultant services and monitoring solutions, and the production of plastic does not have such awareness as with other activities of the company in the Republic of Karelia. Therefore, marketing also will need a large investment. The price of the cage frame produced by the Ecofoster will be probably higher than that of competitors, due to the company needing to purchase the cage construction instructions and make them from good materials. For example, other

producers in the Republic of Karelia are able to offer a lower price by making cage frames out of thinner low pressure polyethylene.

Additionally, it will be difficult for Ecofoster to enter the fish farming market, due to another producer already marketing its own products and having tested them at farms in the Republic of Karelia. However, Ecofoster will need to find fish farms that would like to purchase cage frames without seeing the product in use or the company needing to invest in producing one and allowing it for testing to some farm. Testing would also require time, before a customer can see that a cage frame of Ecofoster is of good quality.

Opportunities

The fish industry in the Republic of Karelia is still in the developmental stage and has not reached its full capacity. The present capacity of fish farms is only one-fourth of the total production capacity. Moreover, only one-fourth of fish farms have modernized equipment, and in some point they will need to change it, which will cause high demand for cage frames in the future as well. This situation will create opportunities for Ecofoster because there are only a few fish farming producers in the Republic of Karelia.

Ecofoster can also exploit its geographical location by consider expanding its operations to the Murmansk region. Another opportunity for Ecofoster is to develop other products for fish farms, for example transport containers and pools, which can also be made out of low pressure polyethylene. Fish farmers mentioned that they prefer to operate with companies which can provide several products or even whole sets from one place for example provide cage frames, hooks, nets, walkways etc. in one package.

Threats

The Republic of Karelia is a relatively small area; therefore the market is small. Moreover, as the industry is still developing, the number of potential customers is low and limited. However, there are several companies selling cage frames in the Republic of Karelia, and fish farms are able to freely choose from whom to purchase cage

frames. At some point, though, the production capacity of fish farms will be achieved, lowering demand for cage frames. One other significant factor is the price of the raw material. As the company is small and the consumption is low, the company can not affect the price much, and it will influence the end price of cage frames.

6 CONCLUSION

The aim of this study was to provide an overview on the fish farming market of the Republic of Karelia for Ecofoster Group Ltd. Provided the information will ease the decision making for a company's management on whether or not to start production and sales of fish farming cage frames in the Republic of Karelia.

General information indicates that the fish farming industry in the Republic of Karelia is expanding. The fish farms are dividing in two parts: big players and small players. The big players such as the company OOO "Segozerskoe" are becoming leaders in their field and slowly pushing small fish farms out of business or forcing them to develop fast. Fish farms are expanding their operations by opening new facilities for growing young fish and fish processing. The current fish production in the Republic of Karelia is also only one-fourth of the total capacity, a fact that may enable fish farms to put new water resources to use.

The research indicates that in general the respondents were satisfied with the current materials the cage frames are made of. Nevertheless, the majority of respondents think that the best material for making cage frame is low pressure polyethylene pipes. Therefore, there is some interest towards cage frames made out of low pressure polyethylene pipes, especially when only one-fourth of fish farms have modernized equipment. The big obstacle for fish farmers is a price of cage frames, due to currently, production of cage frames from wood and barrels is almost ten times cheaper than purchasing cage frames made out of plastic.

In the Republic of Karelia, there are three main companies selling cage frames. Each has already established its own reputation in the market and has already operated in fish farming market several years. There is no clear leader in the market due to differences in opinions and preferences. Cage frames producers also offer the service of repairing cage frames of other producers or, such as OOO "Fish Plast" can even make new frames from old cage frames.

Many fish farmers are still not satisfied with the quality of cage frames made of low pressure polyethylene pipes. The problem of Russians fish cages is that even though they have all the information on how to produce good fish cages, they use unsuitable and often too thin materials such as thinner material than it should be or use in combination parts made of plastic and metal, which leads to fast braking of the cages. Even though the quality of cage frames is not good, fish farmers of the Republic of Karelia are satisfied with the price-quality ratio, due to fish farmers understanding that better quality comes at a higher price.

In the author's opinion there is potential for entering the Karelian market, but at this moment fish farmers are not ready to invest in better quality cage frames as well as not having resources. Nevertheless, in fish farming there is a lot of potential, because if a fish farm considers changing its equipment, it will require a lot of new equipment. For example to produce 140 tonnes of fish, a fish farm needs around 80 cage frames; therefore, there is a lot of potential for a new producer of cage frames.

6.1 Market research in Russia

Conducting market research in Russia is not an easy task especially when the area and market of the research is small. The availability and reliability of information in Russia is low, particularly, when considering web sources. Moreover, people are not willing to share their information if they will not profit from it or the information is classified. General information on the target market was relatively easy to find, but more specific information on the target market’s competition situation and the equipment used was almost impossible to find.

Searching for information in Russia requires a lot of patience, persistence and luck. The search for information is a slow process, due to the fact that information is not fond in a few minutes, but rather finding it requires several hours and days of searching. In addition, in order to ensure the reliability of the information, the author had to compare several sources with similar information.

Contacts and networks play an important role in information gathering. In Russia people are always in hurry and do not have much time for things that in their opinions are irrelevant. They rarely respond to e-mails, and the only way to reach them is by personal calls or visits. Even with a personal call Russians are not willing to answer questions from an unknown person. In that way, it is also hard to gather primary information without personal connections in Russia. In cases when an interviewee was asked to answer questions by someone they knew, the interviewee answered in more depth, was more open and not in a hurry to end the interview. Thus, to succeed or advance in Russia one needs to have personal connections and a lot of patience.

6.2 Suggestions for future research

After conducting this research the author thinks that a wider research would have given a better analysis for the company than solely concentrating on the fish farming market in the Republic of Karelia. For further research the author also suggests studying the fish farming market in the Murmansk region. By researching both the Republic of Karelia and the Murmansk region, the company will be able to determine the profitability of starting the manufacturing of cage frames not only based on the limited area of the Republic of Karelia. Moreover, the Murmansk region may offer more possibilities in the form of sea fish farming.

Additionally, it can be mentioned that the best way of gathering information on fish farming is for a researcher to attend some meetings of fish farmers. The author believes that at this kind of meeting collecting information is fast and easy and also suggests it in future researches in this field.

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APPENDICES

Appendix 1 Questions for fish farmers in English

1. Do you use fish farming cages?
2. What kind of fish farming cages frame are you using at the moment?
    a. How long have you been using your fish cage?
    b. Are you satisfied with it? Any problems?
    c. From where have you purchased it?
    d. Opinion of what is used the most/ what's the best material for cage frame?
    e. Do you have bad/ good experience with other producers of cages?

3. Who do you see as the major producer/seller (foreign or local) of fish farming cages in Republic of Karelia?
    a. Competitive analysis? Are there only a few bigger companies in the market or many small ones?
        - Russian or foreign companies?
    b. Do you think the market is satisfied? No need for another cages producer?

4. Estimated Price level in the market?
    a. Are prices of fish farming cages too high?
    b. Would Russian be willing to pay more for durable fish farming cages made out of PE plastic?
    c. Do you think there is demand for this kind of fish farming cages?
        - Estimated demand?
    d. Would you be interested in purchasing fish farming cages, which are made of PE-plastic in Republic of Karelia with Finnish know-how and quality level, however cheaper than abroad?

5. How do you see future of fish industry?
    a. Are there any problems in the industry development?
    b. What kind of investment are you able to do in future?
    c. Does government help you in any way?

6. How much fish was produced at your fish farm in 2011?

Appendix 2 Questions for fish farmers in Russian language

1. Используетели Вы садки на вашем рыбном хозяйсте?
2. Из какого материала изготовлены Ваши каркасы для садков?
   a. Как долго Вы их уже используете?
   b. Вы довольны ими? Есть ли проблемы? Какого рода проблемы?
   c. Где Вы их закупили? Поставщик используемого каркаса для садков.
   d. Как вы думаете, из какого материалы наилучше изготавливать каркас для содка?
   e. Имеете ли Вы хороший/плохой опыт с другими марками / производителями каркаса для садков? Какими?

3. Как Вы думаете, чьего производства наиболее используются каркасы для садков в Республике Карелии? (Российские или заграничные)
   a. Только несколько больших компаний или много маленьких? (Российские или заграничные)
   b. Как Вы думаете, рынок удовлетворен? Есть ли необходимость в других производителях каркасов для садков?

4. Уровень цен на рынке?
   a. Являются ли цены на существующие модели каркасов для садков слишком высокими?
   b. Есть ли необходимости в более прочных каркасах для садков или старые методы удовлетворяют?
   c. Как вы думаете, готова ли форелевые хозяйства Карелии приобретать более прочные и долговечные каркас для садков из полиэтиленовой трубы?
   d. Как вы думаете, есть ли спрос на каркасы такого рода?
      - Предположительный спрос?
   e. Были бы Вы заинтересованы в покупке каркаса для садков, которые изготовлены из полиэтиленовой трубы в Республике Карелия с финским ноу-хау и уровнем качества, однако дешевле, чем за рубежом?

5. Как вы видете будущие рыбохозяйственного комплекса Республики Карелии ?
   a. Существуют ли какие-либо проблемы в развитии рыбохозяйственного комплекса?
   b. Какие инвестиции вы собераетесь делать в будуещем?
   c. Государство помогает рубоводным хозяйствам?

6 Можете сказать сколько рыбы было выращено на ващем хозяйсте за 2011 год?

Appendix 3 Producers of fish farming cage frames

OOO ”RusProektCtroi”
Address: The Republic of Karelia, Petrozavodsk, street Dzerzhinskogo 3-21
Web-page: http://rusproektstroi.ru
Tel: 8142631717, 9114001717
Representative: Mihailov Aleksei

OOO ”Fish Plast”
Address: The Republic of Karelia, Kondopoga region, village Janishpole, street Naberezhnaja hose 4.
Tel: 89214536638
Managing director: Fedorenko Grigorij

ZAO “Arktik-Salmon”
Address: Murmansk
Representative: Kosher Ilja
Tel: 89212817865